

Amendments to the Claims:

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1-31. (Canceled)

32. (Currently Amended) A security device comprising at least first and second superposed diffractive or holographic optically variable effect generating structures, at least the first structure having a surface relief microstructure, the second optically variable effect generating structure being viewable through the first, and wherein the replay characteristics of the structures generate a visually integrated image and the first and second optically variable effect generating structures have been originated by different ~~processes~~processes; and
wherein the first and second optically variable effect generating structures comprise first and second zero-order diffractive devices, wherein the first zero-order diffractive device generates an image in a first color at a first orientation and in a second color at a second orientation, while the second zero-order diffractive device generates an image in the second color in the first orientation and the first color in the second orientation.

33-70. (Canceled)

71. (New) A security device comprising at least first and second superposed diffractive or holographic optically variable effect generating structures, the first structure having a surface relief microstructure, the second optically variable effect generating structure being a volume hologram viewable through the first optically variable effect generating structure, and wherein the replay characteristics of the structures generate a visually integrated image.

72. (New) A device according to claim 71, wherein the first optically variable effect generating structure includes a discontinuous metallic layer.

73. (New) A device according to claim 71, wherein the first optical variable effect generating structure includes a reflective layer formed by a high refractive index dielectric material.

74. (New) A security device according to claim 73, wherein the first optically variable effect generating structure comprises a substantially pure grating structure defined by said surface relief microstructure, in combination with a high refractive index dielectric layer.

75. (New) A device according to claim 71, wherein the first optically variable effect generating structure is a zero-order diffractive device.

76. (New) A device according to claim 71, wherein the first surface relief microstructure has been originated by one of dot matrix interferometry, lithographic interferometry, e-beam lithography, and two-step rainbow lithography.

77. (New) A device according to claim 71, wherein the first and second optically variable effect generating structures are laminated together via a laminating adhesive.

78. (New) A device according to claim 77, further comprising a photochromic material, a thermochromic material or a luminescent material in the laminating adhesive.

79. (New) A device according to claim 71, further comprising a carrier layer supporting the first and second optically variable effect generating structures.

80. (New) A device according to claim 79, wherein the carrier layer is secured to the first and second optically variable effect generating structures via a release layer.

81. (New) A device according to claim 71, wherein the first optically variable effect generating structure is formed in a lacquer layer.

82. (New) A device according to claim 71, wherein at least one of the optically variable effect generating structures is formed in a polymer material.

83. (New) A device according to claim 71, further comprising an adhesive layer to enable the device to be secured to a substrate.

84. (New) A device according to claim 71, further comprising a dye or pigment provided in or between layer(s) of the optically variable effect generating structures.

85. (New) A device according to claim 84, wherein a pigment is provided chosen from phosphorescent and luminescent materials.

86. (New) A device according to claim 71, further comprising one or more additional optically variable effect generating structures provided between the first and second optically variable effect generating structures.

87. (New) A method of manufacturing a security device, the method comprising providing at least first and second superposed diffractive or holographic optically variable effect generating structures, the first structure having a surface relief microstructure, wherein the second optically variable effect generating structure is a volume hologram viewable through the first optically variable effect generating structure, and wherein the replay characteristics of the structures generate a visually integrated image.

88. (New) A method according to claim 87, wherein the first optically variable effect generating structure is formed by embossing a corresponding surface relief microstructure into an embossing layer.

89. (New) A method according to claim 88, wherein the embossing layer comprises an embossing lacquer or polymer.

90. (New) A method according to claim 87, wherein the origination process for the first optically variable effect generating structure is chosen from dot matrix interferometry, lithographic interferometry, e-beam lithography and two-step rainbow lithography.

91. (New) A method according to claim 87, further comprising providing the surface relief microstructure of the first optically variable effect generating structure with a partially reflective layer.

92. (New) A method according to claim 91, wherein the partially reflective layer is formed by a high refractive index dielectric material or a discontinuous metallization.

93. (New) A method according to claim 87, wherein the first optically variable effect generating structure is a zero-order diffractive device.

94. (New) A method according to claim 87, wherein the first and second optically variable effect generating structures are fabricated separately and then joined together.

95. (New) A method according to claim 94, wherein the first and second optically variable effect generating structures are laminated together with an intermediate laminating adhesive.

96. (New) A method according to claim 95, wherein the laminating adhesive is UV curable, the joining step including irradiating the laminating adhesive through the first optically variable effect generating structure to activate the adhesive.

97. (New) A method according to claim 95, further comprising a photochromic material, a thermochromic material or a luminescent material in the laminating adhesive.

98. (New) A method according to claim 87, wherein the first and second optically variable effect generating structures are provided on a carrier.

99. (New) A method according to claim 98, wherein a release layer is provided between the carrier and the first and second optically variable effect generating structures.

100. (New) A document carrying a security device according to claim 71.

101. (New) A document carrying a security device manufactured according to claim 87.

102. (New) A document according to claim 100, the document selected from the group comprising banknotes, checks, bonds, traveler's checks and vouchers.

103. (New) A method according to claim 102, wherein the document is a banknote.

104. (New) A security device comprising at least first and second superposed diffractive or holographic optically variable effect generating structures, each structure having a surface relief microstructure, the second optically variable effect generating structure being viewable through the first, wherein the first optically variable effect generating structure includes a discontinuous metallic layer, registered with the surface relief microstructure of the first optically variable effect generating structure, wherein a dye or pigment is provided between the optically variable effect generating structures, and wherein the replay characteristics of the structures generate a visually integrated image.

105. (New) A device according to claim 104, wherein the first and second optically variable effect generating structures comprise first and second zero-order diffractive devices, wherein the first zero-order diffractive device generates an image in a first color at a first orientation and in a second color at a second orientation, while the second zero-order diffractive device generates an image in the second color in the first orientation and the first color in the second orientation.

106. (New) A device according to claim 104, wherein the second optically variable effect generating structure includes an opaque, reflective layer.

107. (New) A device according to claim 104, wherein the first and second optically variable effect generating structures have been originated by different processes.

108. (New) A device according to claim 104, wherein the first and second surface relief microstructures have been originated by one of dot matrix interferometry, lithographic interferometry, e-beam lithography and two-step rainbow lithography.

109. (New) A device according to claim 104, wherein the first and second optically variable effect generating structures are laminated together via a laminating adhesive.

110. (New) A device according to claim 109, wherein the dye or pigment comprises a photochromic material, a thermochromic material or a luminescent material in the laminating adhesive.

111. (New) A device according to claim 104, further comprising a carrier layer supporting the first and second optically variable effect generating structures.

112. (New) A device according to claim 111, wherein the carrier layer is secured to the first and second optically variable effect generating structures via a release layer.

113. (New) A device according to claim 104, wherein one or more of the optically variable effect generating structures is formed in a respective lacquer layer.

114. (New) A device according to claim 104, wherein at least one of the optically variable effect generating structures is formed in a polymer material.

115. (New) A device according to claim 104, further comprising an adhesive layer to enable the device to be secured to a substrate.

116. (New) A device according to claim 104, further comprising one or more additional optically variable effect generating structures provided between the first and second optically variable effect generating structures.

117. (New) A method of manufacturing a security device, the method comprising providing at least first and second superposed diffractive or holographic optically variable effect generating structures, each structure having a surface relief microstructure, providing the surface relief microstructure of the first optically variable effect generating structure with a discontinuous reflective metal layer registered with the surface relief microstructure of the first optically variable effect generating structure; and providing a dye or pigment between the optically variable effect generating structures, whereby the second optically variable effect generating structure is viewable through the first, and wherein the replay characteristics of the structures generate a visually integrated image.

118. (New) A method according to claim 117, wherein each optically variable effect generating structure is formed by embossing a corresponding surface relief microstructure into an embossing layer.

119. (New) A method according to claim 117, wherein the embossing layer comprises an embossing lacquer or polymer.

120. (New) A method according to claim 117, wherein the first and second optically variable effect generating structures are originated by different processes.

121. (New) A method according to claim 117, wherein the origination processes are chosen from dot matrix interferometry, lithographic interferometry, e-beam lithography and two-step rainbow lithography.

122. (New) A method according to claim 117, wherein the first and second optically variable effect generating structures are fabricated separately and then joined together.

123. (New) A method according to claim 122, wherein the first and second optically variable effect generating structures are laminated together with an intermediate laminating adhesive.

124. (New) A method according to claim 123, wherein the laminating adhesive is UV curable, the joining step including irradiating the laminating adhesive through the first optically variable effect generating structure to activate the adhesive.

125. (New) A method according to claim 117, wherein the dye or pigment comprises a photochromic material, a thermochromic material or a luminescent material in the laminating adhesive.

126. (New) A method according to claim 117, wherein the first and second optically variable effect generating structures are provided on a carrier.

127. (New) A method according to claim 126, wherein a release layer is provided between the carrier and the first and second optically variable effect generating structures.

128. (New) A document carrying a security device according to claim 104.

129. (New) A document carrying a security device manufactured according to claim 117.

130. (New) A document according to claim 128, the document selected from the group comprising banknotes, checks, bonds, traveler's checks and vouchers.

131. (New) A method according to claim 130, wherein the document is a banknote.